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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/009,714 | 12/27/2001 | John Clement Preston | WAT0120 | 4729 |

7590 04/05/2004

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EXAMINER

SLACK, NAKO N

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| ART UNIT | PAPER NUMBER |
|----------|--------------|

3635

DATE MAILED: 04/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/009,714 | Applicant(s) PRESTON, JOHN CLEMENT | |
| | Examiner Naoko Slack | Art Unit 3635 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on March 8, 2004 has been entered. Claims 1-12 have been cancelled as requested, and an examination of new claim 13 is presented below.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 13, lines 10 and 11, "the component" does not differentiate between the six-sided structural component defined in line 1 and the structural component defined in line 3.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over US

Patent 2,936,051 to Martin in view of US Patent 2,114,901 to Henderson.

Claim 13:

Martin discloses a fabricated structural component, having six substantially planar faces corresponding to the sides of an elongated rectangular prism component (20, Figure 1), comprising two structural components (74, Figure 10), each structural component comprising two identical, elongated angle sectioned elements (76, Figure 10), each comprising a side flange (75, Figure 11) and an edge flange (77, Figure 11), two end plates (56, Figure 8), each end plate extending from an end of one angle sectioned element to a corresponding end of the other angle sectioned element (web plates 56 extend from one angle member 22 to another angle member 24, Figure 8) and Tie means comprising discrete channel members 46 with back plates extending between and welded (column 2, line 45) to co-planar side flanges (26, Figure 6) of the two angle sectioned elements, whereby the two angle sectioned elements are held rigidly together in a parallel, spaced apart configuration, further each side flange includes a margin of the side face of the component, each edge flange includes an edge face of the component, and said end plates include end faces of the component, such that the component has five substantially planar faces, said spacing of the spacer plates permitting hand access between the angle sectioned elements,

wherein each said side face is pierced by a plurality of fastener clearance holes arranged in two straight rows, each extending longitudinally of a respective one of said margins, wherein the holes in each row in said side face have a constant center to center pitch distance, wherein the distance from the center of each end hole in each row of holes in said side face to a respectively adjacent end face of the component is substantially one half of said pitch distance, wherein the distance from the center line of each row of holes in said side face to a respectively adjacent edge face of the component is substantially one half of said pitch distance, and wherein the center lines of the rows of holes in said side face are separated by a distance substantially equal to a whole number multiple of said pitch distance (best shown in Figure 9, where the holes in the side face are equally spaced at a given pitch distance from each other, and the end holes are half the pitch distance to the end face and edge face of the component; and in Figure 1, where the structural component 20' is joined to vertical components 20),

wherein each said edge face is pierced by a plurality of fastener clearance holes arranged in a straight row extending longitudinally of said each edge face, wherein the center to center distance between the holes in the row in said each edge face equals said pitch distance (best shown in Figure 9, where the holes in the edge face are equally spaced at a given pitch distance from each other, and the end holes are half the pitch distance to the edge face; and in Figure 1, where the structural component 20' is joined to vertical components 20), wherein the distance from the center of each end hole in the row of holes in said each edge face to a respectively adjacent end face of

the component is substantially one half of said pitch distance, and wherein the distance from the center line of the row of holes in said each edge face to the side face of the component is substantially one half of said pitch distance (best shown in Figure 9, where the holes in the end face are equally spaced at a given pitch distance from each other, and the end holes are half the pitch distance from the edge face to both the end face and the side face; and in Figure 1, where the structural component 20' is joined to vertical components 20); and

wherein each end face is pierced by at least two fastener clearance holes (holes on end face best shown at 82, Figure 9), wherein the distance from the center at each of said at least two holes in each end face to said side face is substantially one half of said pitch distance (best shown in Figure 9, where all holes on the end face are evenly spaced from each other at a given pitch, and the corner holes are half the pitch distance to the side face) and wherein the distance from the center of each of said at least two holes in each end face to a respectively adjacent edge face is substantially one half of said pitch distance (best shown in Figure 9, where all holes on the end face are evenly spaced from each other at a given pitch, and the corner holes are half the pitch distance to the edge face), said structural components united as a dual component by a plurality of discrete, spaced apart internal cross braces (80, Figure 10), such that corresponding edge faces of the two single components are spaced apart and co-planar (co-planar edge faces 76 and 65 best shown in Figure 11), and wherein the internal cross braces are such that the distance between the center lines of the rows of holes in each pair of corresponding edge faces is a whole number multiple of said pitch distance (whole

number multiple of the pitch distance is shown by the end face in Figure 9, as the corner holes on the end faces equal the distance between the holes on coplanar flanges 76), and the end faces of the single components at corresponding ends thereof are merged into a single end face (50, Figure 8) at each end of the dual component.

While Martin's tie means comprise a zig-zag member joining the angle elements, Martin fails to disclose a plurality of discrete and spaced apart spacer plates; however, the use of discrete and spaced apart spacer plates for joining angle elements is well known in the art. For example, Henderson discloses a structural steel system comprising angle elements (2, figures 4 and 6) joined by a plurality of spaced apart spacer plates (3, Figures 4 and 6). Henderson states that the members may be welded (page 2, lines 7-9). Benefits of Henderson's system include simplicity, light weight, detachability, and adjustability (page 1, lines 5-12).

In view of Henderson, it would have been a matter of obvious design choice to one of ordinary skill in the art at the time the invention was made to use a plurality of spaced apart spacer plates between Martin's angle members, as Martin is concerned with providing a metal structural unit having maximum strength and minimum weight (column 1, lines 25-27) and one which is quickly, easily erected and dismantled (column 1, lines 19-24).

Response to Applicant's Remarks

Applicant's remarks concerning the fastener clearance holes with respect to the Henderson and Meyer references is moot, as this rejection has not been used in this Office Action. A response to Applicant's remarks that Martin fails to teach spaced apart spacer plates and lacks motivation to use the spaced spacer plates taught by Henderson is discussed in detail in the rejection above. As stated in the rejection, Martin uses ties means to join angle members to produce modular units that have maximum strength and light weight. Martin further states that "...other embodiments are contemplated and numerous changes and modifications made be made therein without departing from the spirit of the invention" (column 4, lines 13-16). Therefore, the use of Henderson's web plates in place of Martin's zig-zag configuration would have been an obvious choice of design, as Henderson's configuration also offers the benefit of light weight to strength.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naoko Slack whose telephone number is (703) 305-0315. The examiner can normally be reached on Mon-Fri (6:00 am-2:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl D. Friedman can be reached on (703) 308-0839. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Naoko Slack
Patent Examiner
Art Unit 3635

NS

March 29, 2004